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ABSTRACT OF THE DISCLOSURE

In a transmission comprising an endless silent chain and a sprocket the inside tooth faces of the link plates of the chain are identical to tooth profiles, arranged axially, of a hob cutter for forming teeth of the sprocket. The inside and outside tooth faces also satisfy $H_i = H_o + H_s$, where H_i is the distance from a pin center line L_p to a pitch line L_i of the inside tooth faces, H_o is a distance from the pin center line to a pitch line L_o of the outside tooth faces, and H_s is the amplitude of polygonal motion of the chain. Each link plate also has a concave bottom surface between its teeth to avoid interference with edges of the involute teeth arising due to the chain polygonal motion amplitude when the outside tooth faces are brought into meshing engagement with the involute teeth and become seated thereon.
